

IN THE CLAIMS:

Please cancel claims 2, 10, 15, 21, 26, and 34. Please also amend claims 1, 3, 4, 6, 11, 12, 14, 16, 17, 19, 22, 23, 25, 27, 28, 30, 35, and 36 as shown in the complete list of claims that is presented below.

Claim 1 (Currently Amended): A method for displaying a structural view of a computer program on a monitor during a debugging session, said method applying within a computer system, said method comprising:

displaying a portion of a program call graph (PCG) on the monitor, wherein said PCG includes a P_node symbolically representing a first procedure and a procedure relationship symbolically representing a calling association from said first procedure to a second ~~procedure~~ procedure;

determining a condition for said first procedure while executing the computer program; and

updating the display on the monitor to mark said P_node based on said condition into a marked P_node, wherein said marked P_node is visually distinguishable from said P_node.

Claim 2 (Canceled).

Claim 3 (Currently Amended): The method of claim 2, 1, wherein said condition is taken from the group consisting of an execution state, an execution frequency

and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 4 (Currently Amended): The method of claim 2, 1, wherein said ~~marking is changing a~~ marked P_node has an altered symbolic attribute from an unaltered P_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 5 (Original): The method of claim 1, further comprising:
creating a list of a plurality of PCG procedures from said portion of said PCG; and
recording said list of said plurality of PCG procedures onto a memory, said memory being retrievable.

Claim 6 (Currently Amended): A method for displaying a structural view of a computer program on a monitor during a debugging session, said method applying within a computer system, said method comprising:

displaying a portion of a control flow graph (CFG) on the monitor, wherein said CFG includes a B_node symbolically representing a first basic block and a basic block

relationship symbolically representing a calling association from said first basic block to a second basic ~~block~~ block;

determining a condition for said first basic block while executing the computer program; and

updating the display on said monitor to mark said B_node based on said condition into a marked B_node, wherein said marked B_node is visually distinguishable from said B_node.

Claim 7 (Original): The method of claim 6, further comprising:
displaying within said B_node a line number associated with a source code statement of the computer program.

Claim 8 (Original): The method of claim 7, further comprising:
displaying within said B_node a portion of said source code statement.

Claim 9 (Original): The method of claim 8, wherein said portion of said source code statement can be alternately toggled for one of either displaying said source code statement or displaying said portion of said source code statement.

Claim 10 (Canceled).

Claim 11 (Currently Amended): The method of claim ~~10~~, 6, wherein said condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 12 (Currently Amended): The method of claim ~~10~~, 6, wherein said ~~marking is changing a~~ marked B_node has an altered symbolic attribute from an unaltered B_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 13 (Original): The method of claim 6, further comprising:
creating a list of a plurality of CFG instructions from said portion of said CFG; and
recording said list of said plurality of CFG instructions onto a memory, said memory being retrievable.

Claim 14 (Currently Amended): A programmable storage device readable by a machine tangibly embodying a program of instructions executable by said machine to perform method steps for displaying a structural view of a computer program on a monitor

during a debugging session, said program applying within a computer system, said method steps comprising:

displaying a portion of a program call graph (PCG) on the monitor, wherein said PCG includes a P_node symbolically representing a first procedure and a procedure relationship symbolically representing a calling association from said first procedure to a second ~~procedure~~ procedure;

determining a condition for said first procedure while executing the computer program; and

updating the display on the monitor to mark said P_node based on said condition into a marked B_node, wherein said marked P_node is visually distinguishable from said P_node.

Claim 15 (Canceled).

Claim 16 (Currently Amended): The programmable storage device of claim 15, 16, wherein said condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 17 (Currently Amended): The programmable storage device of claim ~~15~~, 14, wherein said ~~marking is changing a~~ marked P_node has an altered symbolic attribute from an unaltered P_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 18 (Original): The programmable storage device of claim 14, wherein said method steps further comprise:

creating a list of a plurality of PCG procedures from said portion of said PCG; and
recording said list of said plurality of PCG procedures onto a memory, said memory being retrievable.

Claim 19 (Currently Amended): A programmable storage device readable by a machine tangibly embodying a program of instructions executable by said machine to perform method steps for displaying a structural view of a computer program on a monitor during a debugging session, said program applying within a computer system, said method steps comprising:

displaying a portion of a control flow graph (CFG) on the monitor, wherein said CFG includes a B_node symbolically representing a first basic block and a basic block relationship symbolically representing a calling association from said first basic block to a second basic ~~block~~ block;

determining a condition for said first basic block while executing the computer program; and
updating the display on said monitor to said marked B_node based on said condition into a marked B_node, wherein said marked B_node is visually distinguishable from said B_node.

Claim 20 (Original): The programmable storage device of claim 19, wherein said method steps further comprise:

displaying within said B_node a line number associated with a source code statement of the computer program.

Claim 21 (Canceled).

Claim 22 (Currently Amended): The programmable storage device of claim ~~24~~, 19, wherein said condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 23 (Currently Amended): The programmable storage device of claim 22, wherein said ~~marking is changing a~~ marked B_node has an altered symbolic attribute from an unaltered B_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 24 (Original): The programmable storage device of claim 19, further comprising:

creating a list of a plurality of CFG instructions from said portion of said CFG; and recording said list of said plurality of CFG instructions onto a memory, said memory being retrievable.

Claim 25 (Currently Amended): A debugger for displaying a structural view of a computer program on a monitor during a debugging session, said debugger operating within a computer system, said debugger comprising:

a displayer for displaying a portion of a program call graph (PCG) on the monitor, wherein said PCG includes a P_node symbolically representing a first procedure and a procedure relationship symbolically representing a calling association from said first procedure to a second ~~procedure~~ procedure;

a condition determiner for determining a condition for said first procedure while executing the computer program; and

an updater for updating the display on the monitor to mark said P_node based on said condition into a marked P_node, wherein said marked P_node is visually distinguishable from said P_node.

Claim 26 (Canceled).

Claim 27 (Currently Amended): The debugger of claim ~~26~~, 25, wherein said condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 28 (Currently Amended): The debugger of claim ~~26~~, 25, wherein said ~~marker changes a~~ marked P_node has an altered symbolic attribute from an unaltered P_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 29 (Original): The debugger of claim 25, further comprising:

a lister for producing a list of a plurality of PCG procedures from said portion of said PCG; and

a recorder for recording said list of said plurality of PCG procedures onto a memory, said memory being retrievable.

Claim 30 (Currently Amended): A debugger for displaying a structural view of a computer program on a monitor during a debugging session, said debugger operating within a computer system, said debugger comprising:

a displayer for displaying a portion of a control flow graph (CFG) on the monitor, wherein said CFG includes a B-node symbolically representing a first basic block and a basic block relationship symbolically representing a calling association from said first basic block to a second basic ~~block~~ block;

a condition determiner for determining a condition for said first basic block while executing the computer program; and

an updater for updating the display on the monitor said B_node based on said condition into a marked B_node, wherein said marked B_node is visually distinguishable from said B_node.

Claim 31 (Original): The debugger of claim 30, further comprising:

a line number displayer for displaying within said B-node a line number associated with a source code statement of the computer program.

Claim 32 (Original): The debugger of claim 31, further comprising:
a statement displayer for displaying within said B-node a portion of said source code statement.

Claim 33 (Original): The debugger of claim 32, wherein said portion of said source code statement can be alternately toggled for one of either displaying said source code statement or displaying said portion of said source code statement.

Claim 34 (Canceled).

Claim 35 (Currently Amended): The debugger of claim ~~34~~, 30, wherein said ~~marker changes a~~ marked B_node has an altered symbolic attribute from an unaltered B_node, wherein said symbolic attribute is taken from the group consisting of shade, highlight, color, border thickness, symbol size, symbol shape, and alternation of a visual characteristic.

Claim 36 (Currently Amended): The debugger of claim ~~34~~, 30, wherein said condition is taken from the group consisting of an execution state, an execution frequency and an execution age, wherein said execution state corresponds to either said first procedure having been executed or said first procedure being nonexecuted, wherein said

execution frequency is a rate of said first procedure being executed, and wherein said execution age is a time interval since said first procedure has been executed.

Claim 37 (Original): The debugger of claim 36, further comprising:

a lister for producing a list of a plurality of CFG instructions from said portion of said CFG; and

a recorder for recording said list of said plurality of CFG instructions onto a memory, said memory being retrievable.